DOCUMENT RESUME

ED 246 310 CE 039 456

AUTHOR Magisos, Joel H.; And Others
TITLE Excellence in Vocational Education: Four Levels, Four Perspectives.
INSTITUTION ERIC Clearinghouse on Adult, Career, and Vocational Education, Columbus, Ohio.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE 84
CONTRACT 400-81-0035
NOTE 52p.
AVAILABLE FROM National Center Publications, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, OH 43210-1090. (Order # IN 287).
PUB TYPE Viewpoints (120) -- Information Analyses - ERIC Information Analysis Products (071)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Academic Standards; Adult Vocational Education; Basic Skills; Curriculum Development; Educational Change; Educational Objectives; Educational Policy; *Educational Quality; Equal Education; *Instructional Improvement; Postsecondary Education; Public Schools; School Business Relationship; School Effectiveness; Secondary Education; Teacher Education; *Teacher Improvement; *Vocational Education; *Vocational Education Teachers

ABSTRACT

The papers in this compilation address excellence in vocational education from the perspectives of four educational levels--secondary, postsecondary, adult, and teacher education. The implications of the recent national study reports on education are examined for each level, and standards of excellence and recommendations for action are suggested. First, Joel H. Magisos considers how secondary vocational education will be affected by the national report recommendations. Describing what constitutes excellence at this level, he lists an agenda for action to influence policy at state and local levels. Next, Madge L. Attwood reviews implications for postsecondary vocational education curriculum, teachers, and teaching, focusing on the need for balance between excellence and equity. The increasing importance of adult vocational education in an era of demographic change is emphasized by Susan Imel, who discusses factors affecting quality in the diverse programs at this level. Finally, Ruth Pierce Hughes reports on the recommendations of the national studies as well as extant research on teacher preparation, especially the education of beginning teachers, and makes specific suggestions for vocational teacher education. A list of references concludes the compilation. (SK)

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EXCELLENCE IN VOCATIONAL EDUCATION: FOUR LEVELS, FOUR PERSPECTIVES

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U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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ERIC Clearinghouse on Adult, Career, and Vocational Education
The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, OH 43210-1090

1984

CE039456

FUNDING INFORMATION

Project Title:	ERIC Clearinghouse on Adult, Career, and Vocational Education
Contract Number:	NIE-C-400-81-0035
Educational Act Under Which the Funds Were Administered:	41 USC 252 (15) and P.L. 92-318
Source of Contract:	National Institute of Education U.S. Department of Education Washington, DC 20208
Contractor:	The National Center for Research in Vocational Education The Ohio State University Columbus, Ohio 43210-1090
Executive Director:	Robert E. Taylor
Project Director:	Juliet V. Miller
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This publication was prepared with funding from the National Institute of Education, U.S. Department of Education, under Contract No. NIE-C-400-81-0035. The opinions expressed in this report do not necessarily reflect the position or policies of NIE or the Department of Education.

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FOREWORD

The Educational Resources Information Center Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE) is one of 16 clearinghouses in a nationwide information system that is funded by the National Institute of Education. One of the functions of the Clearinghouse is to interpret the literature that is entered into the ERIC database. This paper is of particular interest to vocational education practitioners, administrators, researchers, and policymakers.

The profession is indebted to Joel H. Magisos and Susan Imel, the National Center for Research in Vocational Education; Madge L. Attwood, the University of Illinois; and Ruth Pierce Hughes, Iowa State University, for their scholarship in the preparation of this manuscript.

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Recognition is also due to Donald Gentry, Director, Purdue Statewide Technology Project, Purdue University; Mary B. Malone, Professor, Rutgers University; and Paul Campbell and Floyd McKinney, Senior Research Specialists, of the National Center for Research in Vocational Education for their critical review of the manuscript prior to its final revision and publication. Susan Imel coordinated the publication's development with the assistance of Sandra Kerka. The editor was assisted by Valija Axelrod and Constance Faddis. Jean Messick and Judy Lombardo typed the manuscript, and Brenda Hemming and Janet Ray served as word processor operators. Editing was performed by Judy Balogh of the National Center's Editorial Services.

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EXECUTIVE SUMMARY

The papers in this compilation address excellence in vocational education from the perspectives of four educational levels--secondary, postsecondary, adult, and teacher education. The implications of the recent National study reports on education are examined for each level, and standards of excellence and recommendations for action are suggested. First, Joel H. Magisos considers how secondary vocational education will be affected by the National report recommendations. Describing what constitutes excellence at this level, he lists an agenda for action to influence policy at State and local levels. Next, Madge L. Attwood reviews implications for postsecondary vocational education curriculum, teachers, and teaching, focusing on the need for balance between excellence and equity. The increasing importance of adult vocational education in an era of demographic change is emphasized by Susan Imel, who discusses factors affecting quality in the diverse programs at this level. Finally, Ruth Pierce Hughes reports on the recommendations of the National studies as well as extant research on teacher preparation, especially the education of beginning teachers, and makes specific suggestions for vocational teacher education. A list of references concludes the compilation.

Information on excellence and vocational education may be found in the ERIC system under the following descriptors: *Academic Standards; Adult Vocational Education; Basic Skills; Curriculum Development; Educational Change; Educational Objectives; Educational Policy; *Educational Quality; Equal Education; *Instructional Improvement; Postsecondary Education; Public Schools; School Business Relationship; School Effectiveness; Secondary Education; Teacher Education; *Teacher Improvement; *Vocational Education; *Vocational Education Teachers. (Asterisks indicate descriptors having particular relevance.)

INTRODUCTION

Joel H. Magisos
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When several National study reports on education were released in 1983, many vocational educators did not see the direct implications for vocational education. By 1984, when some of the recommendations had been implemented, it became apparent that the reports would have a serious effect on vocational education programs. A concern for excellence underlies most of the reports.

As defined by the National Commission on Excellence in Education (1983), "Excellence characterizes a school [and a workplace] that sets high expectations and goals for all learners [and workers], then tries in every way possible to help [participants] reach them" (p. 3). Substantial investments in program improvement at Federal and State levels have been aimed at achieving excellence in vocational education. More needs to be done.

Some vocational educators have questioned whether the National study reports really apply to vocational education, because most of the reports did not specifically address vocational education. This compilation examines the implications of the reports for vocational education, considers what standards of excellence should apply to vocational education programs, and makes recommendations for improvement in vocational education programs.

The papers in this compilation address excellence in vocational education from the perspective of four educational levels--secondary, postsecondary, adult, and teacher education. Each author considers the implications of the recommendations in the National study reports for one of these levels of vocational education. Each suggests standards of excellence and recommends action for achieving excellence at this level.

The first paper, by Joel H. Magisos, explores the implications of the National study reports for secondary vocational education, examines what constitutes excellence at this level, and suggests an agenda for action. This agenda includes examining policy questions, developing positions, and communicating these positions to policymakers at every level.

The second paper, by Madge L. Attwood, considers the implications of the National study report recommendations for postsecondary vocational education curriculum, teachers, and teaching. Emphasizing the need for balance between equity and excellence, she suggests that postsecondary programs should offer a second chance to those who did not succeed at the secondary level. She urges educational leaders to shift from past military metaphors of organizational management to more creative ways of solving educational problems. Drawing upon her experience in the standards-conscious health field, Attwood offers

some solid recommendations, amplified with examples, for achieving excellence. She asserts that any definition of excellence must take into account those who will be served and ends her paper with a lively description of program excellence.

Susan Imel, author of the third paper, points out the demographic shift to a higher proportion of adults--a population with many educational needs. While the National study reports focus on elementary and secondary education, much attention is given to developing basic and higher-order learning skills as a prelude to a lifetime of learning. Imel suggests that standards of excellence in adult vocational education may be developed in organization and management, program content, balance between quality and equality, teachers and teaching, and leadership. She asserts that concerns about economic development, productivity, and lifelong learning provide the context for developing excellence in such a diverse area as adult vocational education.

Ruth Pierce Hughes, author of the fourth paper, points out that criticisms of teacher education started long before the recent criticisms of the schools. She systematically reviews the recommendations on teacher education in the National studies and then reports the extant research findings regarding selection criteria, credentialing, content and process of teaching, and recent moves toward a more global or international perspective by teachers. She reviews recent recommendations on preparing beginning teachers and makes some specific recommendations for vocational teacher education.

Each author brings a different perspective and approach to achieving excellence at various levels in vocational education. The reader is struck by the humanistic sensitivity of all four authors who each express the need for understanding student differences in capability, developmental rates, and interests. They offer different recommendations for action, none of which is altogether universally applicable to all levels or exclusively applicable to just one level. The richness of the compilation is in the difference in perspective and approach taken by the authors.

EXCELLENCE IN SECONDARY VOCATIONAL EDUCATION

Joel H. Magisos
The National Center for Research in Vocational Education

Introduction

The growing concern about excellence in education has focused largely upon secondary schools. Recent National studies by prestigious groups have called urgently for reform of various aspects of secondary education. The principal motivation for the studies seems to have been the Nation's economic problems. The public has become aroused and political leaders have become involved. Action has already been taken by some State legislatures and local school boards.

Recommendations for the reform of high schools have been made before. For example, the National Commission on the Reform of Secondary Education (1973) proposed new National goals for secondary schools, revitalization of the curriculum content, and alternatives to traditional secondary education. The latest reports are different because they propose returning to more traditional patterns in the high schools. Vocational education receives little attention in the reports, even though vocational education enrollment is concentrated in high schools and economic development is a major motivation for the studies. Howe (1983) asks:

> Does this omission imply that all is well with vocational education and that it should keep on doing what it has been doing? Or does it perhaps suggest that there just isn't much interest in vocational education because it is not seen as very significant? (p. 172)

While most of the reports do not directly address the problems of secondary vocational education, there have been other studies that do so. Furthermore, the recent reports are having an effect on secondary vocational education even though they do not address vocational education. Responding to the recommendations in the National study reports, State and local boards of education are raising high school graduation requirements. Colleges and universities are raising admission standards. As a result, vocational education enrollments are dropping as students shift their attention to meeting these higher graduation and admissions requirements (Pipho and Flakus-Mosquedo 1984). This decrease in enrollment has raised debate about the role of vocational enrollment in secondary schools.

Vocational education has had a significant role in secondary schools since 1917 when the Smith-Hughes Act was passed. It has been demonstrated that Federal-State and State-local cooperation can facilitate the meeting of individual and societal needs. According to the National Center for Education

Statistics (Dearman and Plisko 1981), over 10 million students were enrolled in secondary vocational education programs in school year 1978-79.

Vocational education provides an alternative course of study for those not intending to go to college, contributes to more equal opportunities, and provides students with the knowledge and skills needed to take and hold entry-level jobs (David 1983). A survey of adults aged 20 to 34 revealed that taking vocational education in high school led to higher weekly earnings over the first 15 years following high school, that graduates used their vocational training on their jobs, and that they were well satisfied with their high school curriculum (Mertens and Gardner 1983). Conversely, the five main categories of criticism of vocational education are--

- o inadequate collaboration between secondary and postsecondary education,
- o lack of coordination between modes of providing occupational education and training,
- o failure in providing for all special needs students,
- o inability to be responsive, and
- o lack of integration between the general and academic curriculum (David 1983)

The National Reports on Education

Some of the National reports on education reflected perceptions of vocational education that may reveal basic attitudes toward it or have implications for change of the role of vocational education in high schools. Goodlad (1984) sees general vocational education as an important part of the secondary school curriculum, but criticizes it for not keeping pace with new technology and for not being rigorous enough. The National Commission on Excellence in Education (1983) recommends vocational education as an important elective. Boyer (1983), recognizing that many believe vocational education holds students in high school, is nevertheless disappointed in its job placement record. Boyer opposes placing students on a vocational track. He characterizes vocational education as often irrelevant or inadequate. While putting emphasis on the need for a trained work force, the Task Force on Education for Economic Growth (Action for Excellence 1983) fails to mention vocational education. However, the task force's sponsor, the Education Commission of the States, had issued a strong policy recommendation favoring secondary vocational education earlier.

The National Science Board Commission (1983) favors improvement in technological literacy but is against specific job skills training at the high school level. Education for Tomorrow's Jobs (Sherman 1983) has been characterized as vocational education's excellence report, even though its focus is fairly narrow. It strongly advocates vocational education as a solution to the youth unemployment problem. Adler (1982) includes preparation in basic skills for future careers as an objective but opposed skill training in any

form. The Twentieth Century Fund Task Force (Peterson et al. 1983) does not make recommendations about vocational education, but a balanced treatment of policy development in vocational education is given in Peterson's background paper for the report. The College Board's report (Academic Preparation for College 1983) concentrates on the college-preparatory curriculum, not on the comprehensive high school curriculum.

Of great interest to vocational education will be the findings and report by the National Commission on Secondary Vocational Education, which is currently examining the need for secondary vocational education, problems of student access, responsiveness to jobs and workplaces, and coordination with academic programs ("National Commission on Secondary Vocational Education Formed" 1984). This commission has been preparing background papers, making observations in schools, and taking testimony. It will issue a report in early 1985.

The Report Recommendations: Implications for Secondary Vocational Education

Certain precepts about American education underlie most of the recommendations in the reports:

- o Education is correlated with economic and social development
- o Quality education as a lifelong process is a universal right
- o Public schools will continue as a mainstay of our society
- o Quality teachers and teaching underlie improved learning
- o Accountability and leadership by all must increase (Griesemer and Butler 1983)

Do the same precepts hold true for vocational education? First of all, vocational education was founded on the premise that education should be correlated with economic and social development. Second, programs at secondary, postsecondary, and adult levels demonstrate that vocational education can be a lifelong process. Third, while proprietary vocational schools abound and some leaders advocate shifting job training to private employers, vocational educators have continued to promote strong public school vocational education programs. Fourth, support for teacher education programs and rigorous certification standards, especially in occupational skills, have shown that there is belief in quality teachers and teaching. Last, accountability has been demanded and leadership has been facilitated by Federal vocational education legislation.

There have been nearly as many analyses of the National reports as there have been reports. Howe's (1983) analysis is particularly perceptive and provides a framework within which to examine the implications of the reports, collectively, for vocational education. His integrative summation of the reports lists 10 major recommendations:

- o Achieving greater consensus on goals
- o Focusing on a common core of learning
- o Stiffening subject matter and skills requirements
- o Emphasizing getting more able teachers
- o Renewing focus on basic skills, higher-order skills, homework, and more time in school
- o Finding ways to meet short-term, critical teacher shortages
- o Emphasizing the principal's role, restructuring the school, and enlisting help from others
- o Defining a strong Federal role
- o Seeking partnerships with business and higher education
- o Emphasizing a balance between quality and equity

What do these recommendations mean for vocational education? Some of the implications are explained in the following paragraphs.

Achieve Greater Consensus on Goals

If new goals for education are sought at National, State, and local levels, vocational educational programs may be adversely affected by the revision. Vocational education could be omitted or curtailed if job preparation is not included in secondary school goals. Conversely, there may be new opportunities to clarify vocational education's role in the secondary schools. In either case, vocational education leaders should be developing and advocating a position on secondary vocational education

Focus on Common Core of Learning

There is strong support for a common core of learning in the secondary school curriculum. Most vocational educators would strongly support a curriculum that better prepares students for participation in vocational education and for a more meaningful life. Vocational educators could incorporate basic skills into secondary vocational education programs as part of a general effort to improve the common core of learning. The major concern, however, is that the common core or "new basics" would squeeze the electives out of the secondary school. A monolithic curriculum, one danger of efforts to enlarge the common core of learning, might result in one of two unfortunate results--much higher dropout rates or a gradual lowering of standards to prevent dropouts. Neither result--elite schools for elite clientele or a "nothing" curriculum that meets no one's needs--would be desirable.

Stiffen Subject Matter and Skill Requirements

Many of the reports recommend stiffened requirements for high school graduation, college admission, and grades. Tougher standards for grades would be desirable for vocational education, too. However, the appropriateness of the graduation requirements, the adequacy of alternative programs, and the level of support available for students with special needs must be carefully considered.

Get More Able Teachers

Concern for the plight of teachers and teaching in vocational education is as acute as it is in other high school programs. Occupationally competent teachers are attracted by better salaries in other jobs. Vocational teachers with poor or outdated occupational skills are not attractive to other employers, and, if they are tenured, they can stand in the way of program improvements and change. More flexibility is needed in teacher recruitment, selection, preparation, certification, and pay. Only then can teachers be attracted from business and industry, exchanges of personnel be arranged, and teachers cycled back to modern jobs for updating of occupational skills.

Renew Focus on Skills, Homework, and Time

The renewed emphasis on basic skills, higher-order skills, homework, and more time in schools that is likely to result from the reports should have a positive influence on vocational students. Vocational education courses can be a vehicle for acquisition of basic and higher-order skills. Supervised practice, home projects, and cooperative work experience have been used in the past to increase the intensity of student experience.

Meet Short-Term Critical Teacher Shortages

There are teacher shortages in critical occupational areas in vocational education. Flexibility in pay and certification, exchange of teachers and private sector employees, and cooperative work experience for teachers are seen as ways to overcome this problem. As precedent is set in dealing with teacher shortages in such fields as mathematics and science, it may be easier for vocational education to employ similar means to solve teacher shortage problems.

Emphasize the Principal's Role

The building principal plays a key role in establishing the place of vocational education in the secondary school program. Few principals have been prepared to give leadership to vocational education; therefore, effort should be made to provide principals preservice and inservice training in vocational education administration. School effectiveness studies have

consistently shown the importance of building-level leadership in improving school effectiveness (Edmonds 1982). Likewise, local direction of vocational education programs must improve.

Define a Strong Federal Role

Some of the reports advocate a strong Federal role in education. A continuing, strong Federal role in vocational education is at issue in Congress as it considers reauthorization of the Federal vocational education legislation. The result of this legislative decision will cast the role of the Federal Government for years to come. Vocational educators would continue to support a strong Federal role in vocational education, but want enough flexibility in the Federal legislation to allow for diversity of programs at State and local levels.

Seek Partnerships

The National study reports advocate forming partnerships with business, industry, and labor. Vocational education has been establishing and maintaining such relationships for years through advisory councils, cooperative work experience programs, job placement, and student follow-up. Cautions have been raised about accepting such partnerships uncritically (Pratzner 1983). While paying attention to these cautions, vocational education should be taking the lead in developing education-business partnerships. Also, increasing attention needs to be given to articulating secondary vocational education programs with those offered in postsecondary institutions. Special emphasis must be given to keeping options for higher education open to vocational students. For high school students, vocational education should be a means to future work and continued learning.

Emphasize Balance between Quality and Equity

Most of the National study reports have their own definition of quality, but few face up to the issues raised by Gardner (1961) in Excellence: Can We Be Equal and Excellent, Too?:

> It is possible to have excellence in education and at the same time to seek to educate everyone to the limit of his ability. A society such as ours has no choice but to seek the development of human potentialities at all levels. It takes more than an educated elite to run a complex, technological society. Every modern, industrialized society is learning that hard lesson. (p. 90)

Vocational educators should adopt and promote this ideal by seeking excellence in every course, no matter how simple or complex, for every student. By providing equitable access for every student and by adopting a theme of excellence, vocational education can play a major role in achieving excellence in education and society.

What Constitutes Excellence in Secondary Vocational Education?

The dilemma facing vocational education is characterized by Hoachlander's (1983) comment:

> Vocational education in America is a diverse enterprise that at once reflects the very best and the very worst of education in the nation's public schools.

Dynamic, goal-oriented vocational programs leading to interesting, well-paying jobs can be found in many school systems. In others, the vocational education program is looked upon as the dumping ground for unmotivated, underachieving students. How has secondary vocational education been doing from the employers' point of view? A randomly selected group of 2,000 members of the National Association of Manufacturers most frequently gave secondary vocational education a "C" grade, compared to a "B" for postsecondary education (Nunez and Russell 1982). Employers hire vocational students because less training is required at a lower cost. They value most the role that vocational education has in developing employability and occupational skills.

What goes on in classes that makes a difference? And, can what goes on in classes be changed to make them more effective? Time on task has been identified as a key variable that may influence classroom effectiveness. Findings from two exploratory studies (Halasz and Behm 1983; Halasz, Behm, and Fisch 1984) suggest differences in the time spent on task by secondary versus postsecondary vocational students. In secondary vocational classes, students spend from 64 to 76 percent of their time on task and about 30 percent off task.

In comparison, postsecondary students spend about 83 percent on task and 17 percent off task. This line of inquiry will eventually identify the factors that influence the time on task spent by vocational students. Specified time on task may become an important vocational program standard because the time spent on task is a key to effective learning.

Is it any wonder that secondary vocational education has come under serious question when it gets lower grades from employers and when less time is spent on task in secondary classes? These problems must be overcome if secondary vocational education is to achieve excellence and be recognized for it.

One means of achieving excellence is to establish standards that can serve as the basis for evaluation and program improvement. Federal legislation and administrative rules and regulations set some program standards that can be further specified in State plans. Although State plans provide direction for local programs of vocational education, in the final analysis, the local board of education establishes the standards under which programs operate.

Standards for vocational education program outcomes (e.g., gainful employment, occupational knowledge and skills, or potential for occupational advancement) can be established. Standards can also be derived from licensing standards, suggested by advisory committees, or obtained from task analyses.

Although standards can be applied to results (e.g., outcomes, licensing, job performance), standards must also be applied to the process of education (e.g., teacher certification, course content, program length, facilities, equipment). Evaluation of both process and product, as a means to program planning and development, is essential.

Agenda for Action

The reaction of vocational educators to the National reports has been diverse. Some have been indifferent or defensive; others have hastily prepared pronouncements or undertaken critiques and analyses of the reports. The problem is whether the report recommendations can provide useful direction to positive changes.

Changes in policy may be necessary. What are the policy questions for secondary vocational education? The Southern Regional Education Board (Galambos 1984) identifies 10 policy questions:

- What is the primary purpose of vocational education in the high schools: (1) prevocational and career exploration, (2) training for specific trades, or (3) basic skills instruction through vocational applications?
- Can secondary schools successfully address all three objectives, or should the mission of a school be limited?
- Is it realistic to expect the numerous comprehensive high schools to offer quality vocational programs that entail preparation for specific trades? If so, in what variety?
- What opportunities exist to expand on-the-job training (cooperative training) alternatives to job skills training within comprehensive high schools?
- "Consumer and homemaking" and many of the industrial arts courses, from an employment standpoint, may be more akin to general education than to vocational preparation. Might these courses be considered as elective in the regular general education program of secondary schools, with a shift of the vocational funds that are now allocated for these areas to occupationally specific areas?
- Can basic skills instruction be integrated into vocational courses? Will this improve basic skills instruction for students who have limited interest in academic subjects?
- Is the image of vocational education in the high school enhanced through opportunities for joint enrollment of high school students in post-secondary programs?
- If the mission of both high schools and postsecondary institutions is to offer training for specific trades, what opportunities exist for

improved utilization of available resources and programs by both sectors and for facilitating the progress of students?

- o For both secondary and postsecondary levels, how relevant are current offerings to market demands?

- o To what extent is analysis of the foregoing questions dependent on forms of governance?

Are these the right questions? Are there others? A position needs to be developed that addresses the policy questions and is based on the best possible information. This position must be communicated to policymakers who can legislate programs. The American Vocational Association adopted six position statements on secondary vocational education:*

- o Vocational education is an essential part of secondary education.

- o Vocational education in the secondary schools is critical to advancing the nation's technological capacity.

- o High-quality vocational education should be available to all secondary school students, including students with special needs, women, and minorities.

- o Excellent secondary vocational education programs should be based upon appropriate and rigorous standards focused on developing the students' potential for work.

- o An excellent secondary vocational education program should provide for the exploration of and preparation for work and for further education.

- o Up-to-date secondary vocational education programs require creative partnerships and adequate resources.

What needs to be done now is to communicate these position statements to policymakers at State and local levels. The immensity of this communication task is inherent in the large number of local school districts. The communication task will require a concerted effort by leaders in vocational education. This is the next challenge!

Summary

Calls for reform of secondary education are backed by the concrete recommendations of influential study groups. These recommendations are under serious consideration by legislative bodies, political leaders, educators, and others. Although the focus of the recommendations has not been on vocational

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*These statements were adopted on December 6, 1983, by the Delegate Assembly of the American Vocational Association during its annual conference in Anaheim, California.

education, secondary vocational education will be profoundly affected by action to carry out the recommendations. While secondary vocational education has its critics, it has served large numbers of students and has strong support.

The National studies of education recommend clearer goals, a common core of learning, stiffened requirements, more able teachers, more intensive learning, meeting critical shortages of teachers, improved management, a strong Federal role, partnerships, and balance between quality and equity. Vocational education could benefit from the major recommendations of the studies. But the needs of all students must be met, secondary school offerings must include opportunities for vocational education, and excellence must be balanced with equity.

Vocational educators must adopt a mentality for excellence that extends to every course and every student. They must seek to understand the implications for vocational education of every recommendation under serious consideration. Furthermore, they must develop and communicate their own position to the policy bodies at the State and local level.

EXCELLENCE IN POSTSECONDARY VOCATIONAL EDUCATION

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A plethora of studies and reports has inundated educators, policymakers, and the public since 1983. Each has focused primarily on improving secondary education, which has been for some time a target of disenchantment by the American public. The result has been a raised National consciousness for improving schools that has gripped educators and policymakers in a stampede for reform. Nothing of this intensity has been showered on public schools since 1957, when launching of Sputnik I by the Soviets appeared to threaten our position in world politics.

Today's impetus comes from an awareness that people in other countries are able to do some things better than we can. The Japanese make automobiles more efficiently; the South Koreans have built a better steel mill; the German machine tools have become superior to ours. In addition, it is common knowledge that the Japanese have a literacy rate of 99 percent, while some experts claim that about 20 percent of our people are functionally illiterate (Christopher 1983).

While most of the studies are aimed at change in secondary schools, the effects of reform can have important meaning for postsecondary education as well. This chapter will consider the implications for postsecondary vocational education of selected recommendations made for secondary education. Postsecondary vocational education as used here will embrace education for work as provided by technical institutes, community colleges, and other postsecondary institutions.

Curriculum Implications

A common thread running through all the studies is the need for stronger basic academic curricula with an emphasis on cognitive competence. Several of the reports provide a list of specific subjects to be required for high school graduation. The lists vary in length and in emphasis of what should constitute basic skills.

For example, the authors of A Nation at Risk (National Commission on Excellence in Education 1983) define the "new basics" for all students seeking a high school diploma as (1) 4 years of English, (2) 3 years of mathematics, (3) 3 years of science, (4) 3 years of social studies, and (5) one-half year of computer science (pp. 24-27). Boyer (1983) proposes a core of common learning that would also include language, mathematics, and science, but in addition would require development of an understanding of the impact of

technology, of health principles, and of the meaning of vocation. The Task Force on Education for Economic Growth (Action for Excellence 1983), focusing on improving our National competitive position in international trade and commerce, recommends curricula defined in terms of competencies: reading, writing, speaking, listening, mathematical, scientific, reasoning, and basic employment skills; and economic and computer literacy. The Paideia Proposal (Adler 1982) recommends uniform, one-track education that would eliminate all vocational and other specialized courses and electives, except for a second language. The focus would be on acquiring organized knowledge in language, literature, and arts; mathematics and natural science; and history and social studies; developing intellectual skills by coaching; and acquiring an enlarged understanding of ideas and values through Socratic discussion.

Whether course work or competencies are recommended, there is agreement that secondary curricula need to be strengthened. In theory, if curriculum recommendations of the National commissions are successfully enacted, community colleges and technical institutes would be spared the expense of offering remedial courses, teachers in these institutions would be able to focus more intently on the technical aspects of their specialty areas, and employers would have well-prepared, literate beginning employees.

However, simplistic solutions rarely work as well as their authors intend. Evans (1983) suggests that implementation of rigid academic standards such as those set forth in the Paideia Proposal might very well increase the high school dropout rate rather than improve basic academic skills. The result could be preparation of fewer people with the technical skills to join a high-technology work force, since a higher secondary school dropout rate could be expected to reduce the number of applicants to community colleges and technical institutes.

On the other hand, greater numbers of high school dropouts might also result in greater numbers of people turning to community colleges and technical institutes for a second chance at education, hoping to receive training in technical careers but lacking prerequisite skills for success. Community colleges in most States have an open-door policy, admitting students without regard to prior academic performance. This policy has required that expensive remedial course work be provided so that students may correct academic deficiencies in order to have a chance for success in programs of their choice. Demand for these services could be expected to increase incrementally.

Implications for Teachers and Teaching

Several of the National reports express concern that teachers in our society are not as highly regarded as they should be, nor are excellent teachers rewarded in concert with their value to society. In contrast, Japanese public school teachers are accorded high public esteem and consequently see their role as extending well beyond the imparting of knowledge. Japanese teachers generally have a deep concern for the general welfare of their pupils (Christopher 1983).

Many see reform in the area of teacher improvement as critical to all other areas. While the National reports focus on elementary and secondary school teachers, the issues are equally valid for postsecondary teaching. A Nation at Risk (National Commission on Excellence in Education 1983) recommends merit pay and "salary, promotion, tenure and retention decisions tied to an effective evaluation system that includes peer review so that superior teachers can be rewarded, average ones encouraged and poor ones improved or terminated" (p. 30).

Rewarding outstanding teachers is a laudable goal and long overdue. The problem of relying on merit pay as the vehicle is that it will not necessarily produce the overall improvement needed. Instead of merit pay, Barranco (1984) supports giving low-interest loans and scholarships to prospective teachers, abolishing tuition costs for anyone who successfully teaches for 10 years after graduation and granting substantial across-the-board pay increases for teachers. To these perquisites he would add grants for research, sabbatical study, and staff training, all coupled with a rigorous evaluation system. His reservations about merit pay stem from a concern that "although attractive as an idea, merit pay can all too often become divisive in a teaching environment" (p. 8).

Teachers at all levels, in order to do the best possible job, need high morale and high motivation. Research on employee performance consistently shows that people respond favorably, are more motivated, and have higher morale when given some kind of positive recognition. Peters and Waterman (1982) call this the need of people to "stick out." Creating an environment in which every teacher has a chance to receive positive recognition for something is important.

Postsecondary technical instructors who are recognized for the excellence of their teaching ought to be tapped by teacher education institutions as guest lecturers, evaluators of teaching methodology courses, or consultants about emerging teaching needs. For a number of years, the University of California at Los Angeles (UCLA) has had such a program in science education for prospective teachers. Science teachers from local high schools, in collaboration with teacher educators at UCLA, present a class or unit on teaching a science concept. The program has been highly successful, with an invitation to teach being a coveted honor. This type of recognition adapted for vocational technical programs could benefit both the university teacher education program and the community college or technical institute faculty.

In addition to specific extrinsic rewards for teachers, certain subtle changes in organizational dynamics might also contribute to excellent teaching. Improvement is a very personal process that involves the high level of motivation often found when a supportive, challenging environment is coupled with the valuing of individual talents, especially when those talents are consistent with organizational values and purposes. Under these circumstances, morale is typically high and motivation to grow is compelling. Combining this with teacher involvement in school decision making, lively staff development opportunities, and teacher-directed inservice training, results in the makings of a dynamic faculty. Control by manipulation or domination of individuals, seen frequently in formal organizations, generally produces the opposite

effect. Like other formal organizations, many schools emphasize control of faculty in an attempt to control quality of instruction.

Since education is largely a management process, the work of Peters and Waterman (1982) suggests some provocative ideas for thinking about excellence in organizations that might be applied to schools as well. According to the authors, management theory has gone through a series of transformations. The most recent transformation sees the individual in an organization as a complex human being with intrinsic strengths, weaknesses, limitations, contradictions, and irrationalities instead of as a totally rational actor. People in organizations appear to have four basic human needs for meaning, for a modicum of control, for positive reinforcement (to think of themselves as winners in some sense), and for recognizing the degrees to which actions and behaviors shape attitudes and beliefs, instead of vice versa.

According to Peters and Waterman (1982), leading thinkers are departing from past views of management. This is most clearly seen in a shift in metaphors (p. 101). Traditional organizational thought assumes a military metaphor for thinking about enterprises. "Organizations have staff, line, and a chain of command. They develop strategy and tactics . . . they solve problems by discharging people, tightening controls, introducing discipline . . . or clarifying responsibilities--since that's what you do when an army sags" (Weick 1979, p. 49). Weick argues that the military metaphor severely limits our ability to think about organizations sensibly. People solve problems by analogy. The military analogue forces people into a very limited set of solutions to problems and limited ways to organize themselves. The way in which many schools are organized to maintain control also assumes a military metaphor. Even the language of some of the reform reports suggests a military metaphor (i.e., selectively rewarding teachers, discharging teachers, improving teachers, developing more rigorous performance standards).

The newer analogies assume that organizations are to be "sailed" rather than driven; that effective leadership involves timing small interventions so that natural organizational processes amplify rather than dampen them, "more like locating a snowfence to deflect the drifting snow than like building a snowman" (March n.d.). Departing from traditional ways of thinking may be threatening for business executives and school administrators alike who have been brought up in the old school. But the new metaphors open up a whole new set of ways in which people in organizations think about themselves and may suggest new, more creative ways to solve problems that in turn could result in higher morale and motivation.

Finally, excellence in postsecondary vocational technical education requires not only high teacher motivation and morale but instructors who are competent in the skills required by their technical specialties. The instructor of electronics who has not set foot in industry since beginning to teach 5 years earlier is as likely to be out-of-date as a printer who sets type by hand. Work sabbaticals, exchange programs with industry, and incentives for engaging in continuing education for technical updating should be given serious consideration. For example, nearly every teacher of technical subjects today needs to be able to use a computer and to relate its use to the

technical specialty. Special recognition and rewards should be given to those teachers who seek out such additional training.

That a teacher should know how to teach is self-evident. An excellent teacher is able to organize and communicate knowledge and skills in ways that facilitate learning and can relate to students in ways that lead them to develop constructive attitudes. Elementary and secondary teachers must be certified to teach and minimally, must have had specialized preparation in teaching methods, curriculum, and evaluation. While no guarantee of excellence, specific preparation to teach provides a foundation on which the creative teacher can build.

In contrast, postsecondary instructors of technical subjects can be hired without having had any formal training in how to communicate that knowledge and skill to students or how to evaluate the results of teaching. For example, in most States lead instructors of associate degree nursing programs are required to have a master's degree in nursing to ensure their nursing competence. Yet many States do not mandate a single course in teaching methods, curriculum, or evaluation to facilitate their teaching competence. Both technical expertise and educational expertise are seen among excellent teachers.

Excellence, Equity, and Cooperation

The quality of postsecondary vocational technical education programs is linked directly to students' ability to benefit from learning experiences, to the extent to which learning experiences simulate actual working conditions with which students will be confronted, and to the quality of on-the-job internships in which students participate. At the same time, the question of equity needs to be addressed when considering excellence in education.

Excellence and Equity

Ideally, under the reform proposals, all students would have sufficient literacy to move efficiently into preparation programs for high-technology occupations from high school. Unfortunately, the recommendations fail to take into account the complexity of schools and the great diversity that community colleges and technical institutes have attempted to accommodate through open admission policies. The reform prescriptions are for higher academic standards and for examinations that all must pass upon completion of high school to affirm their knowledge and understanding of basic academic areas. What happens to those who do not pass is not addressed.

As problems of those who do not meet more rigorous requirements come to the forefront, communication between faculty of secondary and postsecondary schools will be increasingly important. Community colleges have done a good job of providing remedial work for less-advantaged students to enable them to get into and to succeed in programs that require stronger mathematical, scientific, and English skills. Remedial courses in mathematics, English, and science abound. These efforts need to be continued and strengthened, for raising of high school graduation standards may leave a large number of people who

drop out of school rather than fail. Community colleges and technical institutes offer one more opportunity for these adults.

Cooperation with Industry

Close collaboration with industry is a basic element present in exemplary postsecondary vocational technical programs. Health occupations programs, since their inception, have had a unique relationship with the health industry that might provide ideas for other vocational programs. Because of a tradition placing health service training in hospitals, health occupations programs have had a historical symbiotic relationship with the industry. This relationship has involved cooperation in providing clinical (on-the-job) internships as an integral part of each educational program and collaboration in setting standards for the various health professions and technologies.

Typically, in the evolution of a program, a need occurs for a technical specialist such as an EEG technician. Training begins on a one-to-one apprenticeship-type basis until the demand grows for sufficient numbers to constitute a class. As the expense of training increases and the capability of local educational institutions grows, a cooperative arrangement is developed. Students receive cognitive and laboratory work at the college or technical institute, then affiliate with local health care facilities for integrated, on-the-job technical experience. The health care facility becomes an extended campus for the program.

However, placing students in clinical sites so they can learn with the newest equipment and procedures does not necessarily guarantee a strong educational experience. Busy health personnel may have neither the time nor interest to see that the internship is educationally sound. When collaboration with industry is involved, one key to excellence seems to be control of clinical learning by the educational institution to ensure that the industry-based experiences are educational and that students are properly supervised by qualified instructors.

Parkland Community College in Champaign, Illinois, is preparing respiratory therapists who will provide patient care using complex high-technology equipment such as mechanical ventilators with sophisticated digital readouts and computerized pulmonary function equipment to evaluate patients' lung status. Experience with this type of equipment is gained in local hospitals. The hospitals make their facilities available, and the college provides supervision of the students by hiring full-time clinical instructors whose sole responsibility is arranging and supervising student learning at health sites.

Quality in the performance of health workers has been a dominant concern of industry representatives and health occupations educators alike. Because of the intimate nature of administrations given by health personnel, ways to ensure a minimum level of safe practice for the public have been given much attention. Not only must top-quality programs be evaluated by educational accrediting agencies, each health program has its own accreditation standards to meet as well. National or State accreditation is available to educational institutions by agencies having joint representation of health specialty

educators and health professionals such as nurses, physicians, dentists, dental hygienists, and medical technologists depending on the area of specialization. Typically, minimum program standards are designed by the accrediting agency. To be licensed, registered, or certified in their specialty, students must have graduated from an accredited program and then have passed a standardized examination in their area of specialization. The purpose of the examination is to affirm publicly that the graduate possesses minimum competence to practice safely.

Despite valiant attempts to control program quality through special accreditation and examinations, performance of graduates varies widely and program quality varies just as widely. Program and performance standards are important, but the health occupations experience has shown that much more is needed if education is to be excellent.

Excellent vocational programs also seem to have lively troubleshooting advisory committees made up of educators and technical specialists who continuously monitor student experiences and work together to keep the programs up-to-date and make appropriate sites available for learning experiences.

Terry Desjardins, director of Parkland's respiratory therapy program, has developed a 15-member working advisory committee comprised of local respiratory therapists, hospital administrators, educational directors, pulmonary physicians, a high school instructor, a student, and a college administrator. When it became apparent that many graduates were being tapped for supervisory and department head positions, hospital representatives of the advisory committee voiced their concern about the need for special preparation in education and administration as well as in respiratory therapy for some of the students. Since the college's responsibility lay solely with technical preparation, the committee approached the University of Illinois for help. For 10 years the University of Illinois had been offering a baccalaureate program for health personnel, admitting graduates of technical health programs as juniors and preparing them for teaching positions in community college and high school health occupations programs. Because of the committee's intercession, a management dimension was added to the curriculum to supplement the teacher education major. Today, selected health students who expect to work in a health care institution with administrative and educational responsibilities can enroll in the baccalaureate program, electing a minor emphasis in business administration and a major in education.

A different type of effective industry-education cooperation involving sophisticated simulation equipment is found at Indian Meridian Area Vocational Technical Center in Stillwater, Oklahoma. According to Sewall (1983), Indian Meridian is specializing in innovative industrial training preparing students who may in the future operate flexible manufacturing systems. The stimulus for the program has come from Mercury Maine, a local marine engine employer that, in 1975, needed 900 new employees to turn aluminum ingots into marine engines. With the help of Indian Meridian's assistant superintendent, Mercury Maine's plant manager started on-site training programs. Indian Meridian in turn installed a $750,000 integrated systems trainer that is the core of an industrial technology program at the school. The computer-controlled machine has four pneumatic logic robots that load metal blocks from lower to upper

carousels, just as the current factory equipment does. But the unique educational quality of this machine is that the system is programmed to break down. An instructor can trigger any of 400 possible faults that the students must identify, analyze, and fix. With this type of sophisticated simulation, students are prepared with basic troubleshooting skills before using the factory equipment where too many errors could produce costly shutdowns.

Some Other Thoughts

Any definition of excellence in education must take into account the people who will be involved in becoming excellent. While it is useful for consciousness-raising to focus on raising academic standards, it may be an exercise in futility if the needs and interests of students are ignored in deference to establishing standards that are out of reach for many. This is not to say that reform is not in order. It is--and is long overdue. But in the stampede for world superiority in technology, we must not forget our commitment to educating all the people, taking them where they are and creating learning environments that enable them to achieve proportionately from where they started, whether they are from less-advantaged homes or have been introduced to endless mental stimulation before even entering school. On the other hand, high schools that graduate more students with strong mathematical, scientific, and English skills will be laying the groundwork for some of those students to enter the more demanding postsecondary technical programs that require algebra, trigonometry, and above-average reading and writing abilities.

Excellent vocational technical programs are made up of students who are ready to learn, motivated teachers with high morale who are also expert in their technical fields and in teaching methodology, a physical environment that contains up-to-date equipment for simulating on-the-job experiences and, for most programs, a collaborative relationship with industry that makes possible well-supervised, industry-based educational experiences. Exemplary programs that contain these elements are spotted around the country. The successful elements need to be shared and replicated. Community colleges with their firm commitment to vocational technical education and technical institutes with their singularly vocational mission can make a critically important contribution to preparing an educated work force.

EXCELLENCE IN ADULT VOCATIONAL EDUCATION

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As an area, adult vocational education was virtually ignored in the series of recent reports focusing upon the need for educational excellence. Due to a number of factors, however, education and training for adults have become key components of the vocational education system. Following a discussion of the emerging need for adult vocational education, this chapter examines the relationship of the reports on educational excellence to adult vocational education and delineates factors that contribute to excellence in adult vocational education.

The Need for Adult Vocational Education

The United States is experiencing an increase in the number of adults in the population. According to the National Center for Education Statistics (NCES), by the year 2000, "the United States population will be dominated by persons in their middle years" (Golladay 1976, p. 12). With the exception of the World War II years, the largest single age group has always been children under the age of 15, but in 1980 the dominance shifted to those between the ages of 15 and 29, and in 1984 the median age of the population was 30. By the year 2000, the largest age group will be 30- to 44-year-olds and half the population will be 35 years of age or older (Cross 1981; Kolde 1984).

The influence of the large group of persons born during the baby boom (1947 to 1959) has been felt for some years. In the 1960s great attention was given to youth and their "new values." As the baby boom generation grew older, industry changed the emphasis it placed on the types of products it produced and marketed, and pressures for educational expansion moved from elementary to secondary to postsecondary to adult education (Cross 1981).

Accompanying this demographic change has been a growing realization that adults continue to grow and change throughout their life span. The common assumption that, once individuals reach physical maturity, they also reach psychological and social maturity, has been shattered by an explosion of research and writing over the past decade on what has been broadly termed "adult development" (Cross 1981). As adults pass through life phases and developmental stages, they frequently experience changing expectations about their careers and social relationships.

As a result of these various changes, interest in adult education has been high. During the 1970s, participation by adults in part-time educational activities increased considerably, a trend that is expected to continue

throughout the 1980s and into the 1990s. Part, but not all, of this increase can be attributed to the increase in the number of adults in the population. Between 1978 and 1981, the number of adults in the population increased 2 percent, but participation in part-time instruction by adults increased 8 percent (Plisko 1983).

According to NCES, more than 21 million (or 13 percent) of the 166 million U.S. adults over age 16 participated in one or more adult education activities between June 1, 1980, and May 31, 1981* (Kay 1982). These 21 million adults took more than 37 million courses ranging from hobby and recreational activities to highly technical training (Plisko 1983). Job-related reasons were most often cited as the purpose for taking adult education courses; of the 37 million courses, 60 percent were taken to advance in a current job or to get a new one (Kay 1982).

In light of current economic and social trends, it is not surprising that adults enroll most frequently in job-related, vocationally oriented educational programs. Increasing numbers of adults need or desire training of an occupational nature due to the following trends.

- o Unemployment. Foreign competition as well as the change from an industrial to an information-based economy are factors contributing to structural unemployment (Kolde 1984). Millions of adults who desire and need employment are finding that jobs for which they are qualified are unavailable.

- o Rapid Changes in Technology. Automation, computers, information technologies, and scientific breakthroughs are rapidly changing how work occurs in organizations (American Society for Training and Development 1983). Adult workers need retraining and upgrading as new technologies are adopted in the workplace.

- o Desire to Enter/Reenter the Work Force. Another group of adults needing vocational training are those who wish to enter or reenter the work force. Adults in this group want to acquire skills that will help them find employment. Due to changing social and economic conditions, women constitute a large proportion of this category.

- o Career Aspirations. Changing career patterns and aspirations of adult workers also account for the need for adult vocational education. One recent report suggested that adults are "more career conscious" now than ever before (American Society for Training and Development 1983). Also, a study conducted in the late 1970s projected that 40 million Americans were in a state of transition regarding their careers or jobs, and of those, 62 percent said they planned to seek further education (Arbeiter et al. 1978).

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*NCES says that "adult education consists of all courses and organized activities taken part-time as identified by the respondent" (Kay 1982, p. 1).

Adult vocational education is an essential element not only in the system of adult education but also in the total educational system. It performs the important functions of--

- o helping individuals enter or make transitions in the workplace,
- o providing continuing education for adults as they follow the course of their careers, and
- o keeping the work force current (Kolde 1984).

Because adult vocational education is a vital component in the economic development and productivity of the Nation, it is important to establish criteria for excellence in programs serving adults seeking occupational training. The remainder of this chapter examines the relationship of recent reports on educational excellence to adult vocational education and suggests criteria for determining excellence in adult vocational programs.

The Reports on Educational Excellence: Their Relationship to Adult Vocational Education

With one exception, the reports on the need for educational excellence focus on elementary and secondary education. America's Competitive Challenge: The Need for a National Response (1983) is the only report containing recommendations that apply specifically to adult vocational education. Information from several of the other reports, however, can also be related to that area. This section examines the general relationships that exist between the reports and adult vocational education.

The Need for Lifelong Learning

In terms of adult vocational education, acknowledgement of the need for lifelong learning is an important aspect of A Nation At Risk: The Imperative for National Reform (National Commission on Excellence in Education 1983). Adult educators have long recognized this need. For example, Cross (1981) writes that "change is now so great and far reaching that no amount of education during youth can prepare adults to meet demands that will be made on them" (p. 2). The American Society for Training and Development (1983) suggests that the current environment is one in which "jobs appear, change, and disappear at accelerated rates" and that some experts now estimate that the "average worker will experience over seven major job changes (requiring new skills and knowledges) during the course of his or her career" (n.p.).

According to A Nation At Risk, "Educational reform should focus on the goal of creating a Learning Society" in which members of the society would have the opportunity to participate in educational endeavors from early childhood through adulthood, "learning more as the world itself changes" (National Commission on Excellence in Education 1983, p. 13). Formal schooling in youth prepares the foundation for lifelong learning, but without lifelong learning, skills quickly become obsolete. The report suggests that commitment to

lifelong learning is a part of the search for solutions to educational problems.

The Need for Economic Development and Productivity

Since one of the major goals of adult vocational education is to improve the available pool of human resources, it is closely related to the need for economic development and increased productivity. Although some may doubt that increased investment in human capital will overcome economic woes, Carnevale (1983) argues otherwise. He makes the following points.

- o The human resource is the master economic resource.
- o Educated, healthy, trained and spirited people are the ultimate source of economic growth.
- o People, not machines, are the well-spring of productivity.
- o In the future, workers, not natural resources will be scarce. (pp. 8-9)

Three of the reports address the Nation's need for economic development and productivity. The one overall recommendation of America's Competitive Challenge (1983) is related to this need: "As a nation, we must develop a consensus that industrial competitiveness is crucial to our social and economic well being" (p. 7). The thesis of the report Action for Excellence (1983) also speaks to this need. According to that report, "Our future success as a nation--our national defense, our social stability and well being, and our national prosperity--will depend on our ability to improve education and training for millions of individual citizens" (p. 14). The third report, Education for Tomorrow's Jobs (Sherman 1983), relates to this need in a more indirect way since its major concern is about education and training that will increase the employability of young workers. The report, however, emphasizes the role of vocational education in economic development.

What Constitutes Excellence in Adult Vocational Education?

A number of factors contribute to excellence in adult vocational education. This section discusses excellence in terms of the following categories: organization and management, program content, quality and equality, teachers and teaching, and leadership, including the need for collaboration.

Organization and Management

The system through which adults acquire occupationally related knowledge and skills is a complex mosaic. As the report A Nation At Risk (National Commission on Excellence in Education 1983) suggests, there are "many opportunities for learning in a learning society" (p. 13). The most common settings for learning are homes, the workplace, schools, professional societies, military, and social groups (Carnevale and Goldstein 1983; Silberman 1983). In

1980, 44.6 percent of formal, job-related adult education programs were sponsored by schools, with the balance--55.3 percent--sponsored by non-school organizations. The largest single provider was business firms (33.9 percent), followed by 4-year colleges and universities (16.3 percent) (Carnevale and Goldstein 1983).

Despite the diversity represented by providers of adult vocational education, there are some general criteria for excellence in organization and management. First, institutions and organizations need to be flexible in order to adapt to rapidly changing educational needs. When working with the private sector to provide training programs for adult workers, for example, educational institutions may need to be prepared to adjust schedules to fit workers' schedules and adapt curricula to meet specific training requirements.

Second, providers of adult vocational education should have clear-cut goals that establish the direction and mission of their educational programs. Not only should these goals reflect those of the parent organization, but they should also be shared with all groups associated with the program, including instructors and students (Griesemer and Butler 1983).

Finally, programs should not try to be all things to all people. In establishing mission and goals, sponsoring groups should determine what they can do well and concentrate on those areas. Programs that establish and adhere to specific goals are able to use resources more wisely.

Program Content

Just as institutions and organizations offering job-related adult education are diverse, so are their programs and courses. Instructional formats may range from a 2-hour inservice program covering a new work procedure to an intensive program lasting a year or more designed to retrain adults in high-technology areas. Concerns regarding program excellence in adult vocational education are similar to some of those expressed in the excellence reports. Three themes needing emphasis in program development for occupationally related adult education are discussed next.

Basic skills for adult workers. It is estimated that 23 million American adults (1 out of 5) are functionally illiterate (i.e., they lack basic skills in reading, writing, and mathematics to meet minimum demands of daily living). Another 40 million are just marginally capable of being productive workers (Elfenbein 1983; National Commission on Excellence in Education 1983). Unfortunately, the pool of functionally illiterate adults is increasing yearly by an estimated 2.3 million persons including 1 million youth who leave school without basic skills and 1.3 million non-English-speaking immigrant arrivals ("How Business is Joining" 1983).

While it was once possible for marginally illiterate adults to function in the workplace, advances in technology are making it increasingly necessary for employees to demonstrate higher levels of literacy for both entry-level jobs and job advancement. Individuals who lack basic skills represent a drain on the Nation's productivity. Illiterate or marginally literate employed adults

will most likely never advance beyond entry-level jobs, and those who are unemployed are unlikely ever to find jobs (Elfenbein 1983).

A recent study, Basic Skills in the U.S. Work Force (Henry and Raymond 1982), reports that the lack of employee basic skills is a critical problem throughout the employment market. "Most of the companies responding to the CPR [Center for Public Resources] survey reported significant reading, mathematics, writing, science, reasoning, and speaking/listening deficiencies in most job categories held by high school graduate personnel, adult and youth" (Henry 1983, p. 22).

Because of the enormous costs of illiteracy--to society, to individuals, and to employees--adult vocational education programs must be prepared to help remediate and upgrade basic skills as a part of occupationally related training programs.

Impact of high technology. While it is unclear exactly how the spread of new technologies will affect the workplace, most experts agree that it is unlikely to alter substantially the distribution of employment (Carnevale and Goldstein 1983; Levin 1984; Rumberger 1984). Although few individuals will be engaged in producing the technologies, almost the entire work force will need to be proficient in their use. It is expected, therefore, that the impact of technology on human resource development will be profound since virtually the entire work force will need a greater degree of technical literacy (Carnevale and Goldstein 1983).

Programs developed to train individuals to use new technologies should include both technological and human aspects. Workers need technical information in order to develop the skills necessary to utilize new technologies. The human aspects of training, those that address how new technologies will affect the workers and the work to be accomplished, are equally important, however. Workers may resist adapting new technologies if they are not informed about the consequences of their introduction into the workplace. If new technologies are going to be utilized fully, workers must understand both their positive and negative qualities. The human aspects of technological training can provide information designed to ameliorate resistance to employing new technologies.

Learning how to learn. The necessity for learning throughout the life span has been well documented. It is helpful, therefore, if adults are trained in "learning-how-to-learn" skills in order to increase their competence in learning. This skill will be useful in many situations. According to the report Action for Excellence (1983), for example, most factory and service industry jobs fall into the category of "learning-to-learn jobs" that require basic skills plus the capacity to learn new ones.

Learning how to learn is an important adaptive skill for adults that helps them attack learning problems with different approaches and learning strategies (Pratzner and Ashley forthcoming). Since learning itself involves processes, understandings, and skills, each of which can be taught, it is possible to train adults to become more effective and efficient learners.

Adults can acquire the desire to learn as well as skill in learning through well-designed educational activities. By incorporating the following elements into learning activities, adults will be able to increase their learning-how-to-learn skills.

- o A Spirit of Inquiry. Activities that require or encourage the learner to ask questions or identify or solve problems will help develop an inquiring mind.

- o Capacity to Transfer. Learning programs should provide opportunities for practicing what is learned or for planning for application and implementation.

- o Mastery of Content. If adults master the content presented in educational activities, they will feel confident about their abilities to learn. Also, they will be able to proceed to higher levels of achievement following the training.

- o Awareness of Process. Activities that help learners become more aware of not only what is learned, but also how it is learned will contribute to their knowledge of the learning process (Smith 1982).

Adults who have learned how to learn are equipped not only to continue their own learning but also to train others to be more effective learners (ibid.). Adult vocational education programs should emphasize the importance of understanding the learning process in order that adult students may become more effective and efficient learners.

Quality and Equality

The goal of achieving excellence (quality) in adult vocational education should not negate the goal of achieving equity (equality). Special groups with unmet educational needs include older adults, rural isolated, migrants, adults with disabilities, women (especially heads of households and displaced homemakers), minorities, unemployed adults, institutionalized adults, and adults with limited English proficiency. Programs in adult vocational education need to be developed that will serve the needs of these groups.

In addition, access to existing vocational education programs needs to be improved. Two barriers to participation in high-quality vocational education programs are (1) program entry standards that prohibit those with a lack of basic skills from participating and (2) an undersupply of sound vocational education programs in depressed inner-city or rural communities (Sherman 1983).

The Federal Government, in cooperation with State and local governments, should help develop vocational training programs that will meet the needs of key adult groups as well as increase access to existing programs. Successful program development for select adult populations will only come after careful consideration of the following elements:

- o Economic factors in the provider organization
- o Economic factors affecting the target population
- o The politics of providers and target populations
- o Program leadership and control
- o Program relevance
- o Identification of the target population
- o Recruitment of the target population
- o Development of initial interest
- o Maintenance of continued interest (Smith 1983, p. 102-105)

Teachers and Teaching

Adult vocational education programs are staffed primarily by part-time teachers. As many as 85 percent of the teachers in adult vocational education are part-timers with many holding regular positions in private industry. The use of part-time teachers increases program flexibility; it also ensures that teachers are more likely to be current since they are teaching in their occupational area (Sherman 1983). What it does not ensure, however, is knowledge of teaching. It is, therefore, important that instructors in occupationally related adult education programs be provided information that will allow them to combine their occupational skills with educational practices appropriate for use with adult learners. Inservice or training programs for adult vocational instructors should focus on--

- o principles of adult learning,
- o methods for teaching adults,
- o development of instructional programs (curriculum), and
- o appropriate use of educational technologies for delivering instruction.

There must be some basis on which to judge instructor competencies. One report, Models for Excellence (American Society for Training and Development 1983), the result of an intensive 3-year study conducted by the American Society for Training and Development, is a useful source for developing competency lists. The report lists 15 roles performed by individuals in the training and development field as well as a list of "critical outputs" (tasks) that should be carried out in performing each role. Although no one person would be expected to fill all the roles and, therefore, perform all 102 critical outputs, the list provides guidelines for developing instructor competency lists.

Leadership

Leadership for excellence in adult vocational education should be provided by the Federal Government, States, local districts, and business and industry. The following recommendation from the report America's Competitive Challenge (1983) illustrates the need for cooperative leadership.

> A single, coherent, comprehensive national displaced worker program is needed. Its basic characteristics must be simplicity, self-financing, maximum flexibility and broad coverage. The G.I. bill, with its educational "vouchers," provides a useful precedent. The program could be financed by a third trust fund in the unemployment insurance system-funded jointly by employers, workers and the federal government. (p. 11)

The following recommendations, also from America's Competitive Challenge, would require similar cooperative leadership efforts:

- o The creation of Individual Training Accounts (ITA) to encourage individuals to save for their own training and retraining needs
- o Tax incentives to encourage employers to invest in the education and training of workers
- o Apprenticeship programs designed for older displaced workers to be developed through government-industry-university cooperation.

Even more modest efforts to achieve excellence will require cooperative leadership efforts. Education for Tomorrow's Jobs (Sherman 1983) recommends that mechanisms and incentives be established to induce educators and employers to work together in planning and providing occupational education and training. Regardless of who provides the leadership for such cooperation, the emphasis should be on shared responsibility for providing quality programs.

Conclusion

Adult vocational education is a diverse system, which makes it difficult to develop a formula for excellence that will fit each setting and program. Overriding concerns such as economic development, increased productivity, and opportunities for lifelong learning, however, provide a context for developing quality programs. Even if the Federal Government does not provide leadership for developing a "coherent continuum of learning," business and industry working in conjunction with local and state-level educators can cooperatively provide a coordinated system of adult vocational education that will update the existing "incoherent, outdated patchwork quilt" (National Commission on Excellence in Education 1983, p. 14).

EXCELLENCE IN VOCATIONAL TEACHER EDUCATION

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Introduction

"The field [of teacher education] is not just surrounded by critics, it is inhabited by them," according to Joyce and Clift (1984, p. 5). In their discussion of reform in teacher education, Joyce and Clift go on to accuse teacher educators, including graduates, of generating as much furor internally as do those outside the field. Criticism of teacher education over the years has been matched only recently by criticism of the schools themselves. And criticism of the schools implicitly includes teacher education.

The critics propose solutions that range from elimination of teacher education programs to development of comprehensive 6-year programs. Not to be left out, State legislators have been busy with their own proposals, some of which are substantive, but most of which are merely cosmetic.

Vocational education has been hit especially hard by criticism from recent studies and by related actions. At the same time, enrollments in secondary programs have fallen, some sharply; enrollments in teacher education programs have declined, exacerbating the shortage of teachers in many areas; and vocational teachers have become vocal critics of teacher education.

This paper reviews the status of teacher education and examines how education of vocational teachers is (or is not) affected by present conditions. It then offers suggestions for achieving excellence in vocational teacher education programs.

Perspectives of Commissions and Studies

The most recent comprehensive study of education in the United States is A Place Called School (Goodlad 1984). Goodlad's report followed the much publicized A Nation at Risk, the report of the National Commission on Excellence in Education (1983). Though A Nation at Risk and other study reports were released prior to Goodlad's, the Goodlad study had been underway for sometime. Other important reports include the following:

- Action for Excellence (1983)
- Making the Grade by P. E. Peterson and the Twentieth Century Fund Task Force on Federal Elementary and Secondary Education Policy 1983

- o High School: A Report on Secondary Education in America, the Carnegie Foundation report (Boyer 1983)

- o Education for Tomorrow's Jobs, report of the National Academy of Sciences-National Research Council (Sherman 1983)

All of these reports have influential comments and perspectives on the state of teacher education as well as on education in general. Other studies and reports bear on excellence in teacher education, whether directed to all teachers or to vocational teachers specifically. Of the many available, those that most directly relate to the major studies have been selected.

A Nation at Risk is probably the best known and most often quoted of these studies. It offers recommendations for teacher education as well as for increased emphasis on academic subjects. Among the pertinent recommendations is the creation of a career path for teachers, from beginner to master, with advancement and salary based on effectiveness. The report also proposes that grants be made available to teacher education students preparing to teach in areas of shortage. For all prospective teachers, the report recommends adoption of more rigorous requirements for entry into a teacher education program.

At least two States, Utah and Tennessee, have studied the recommendation on career paths for teachers and have enacted legislation (Pipho 1984). The recommendation on providing special attention to beginning teachers has also appeared frequently in the relevant teacher education literature, but as yet no one has established any firm or consistent procedures. This need has been discussed by Joyce and Clift (1984), as well as by Boyer (1983) in his suggestions regarding school-university cooperation and coordination.

The Twentieth Century Fund Task Force report, Making the Grade (Peterson, et al. 1983), was one of the first to call attention to circumstances that inhibit good teaching. Lack of respect in the community, the difficulties in teaching increasing numbers of problem children, and the complex organizational structures of the schools have discouraged teachers and affected the quality of teaching. Recommendations in the report address the problem indirectly by proposing a master teacher program, merit pay, and strengthened evaluation procedures. These recommendations are similar to those in A Nation at Risk. Unfortunately, both fail to address the stated problems directly. On the other hand, Boyer (1983) specifically addresses the need to prepare teachers for the environments in which they will be working.

Action for Excellence (1983) addressed problems of economic growth. One would expect recommendations of special interest to vocational teacher educators in this report. However, the emphasis of its recommendations is upon greater recognition of teachers, better pay, more emphasis on mathematics and science, and a better curriculum for teachers (both preservice and inservice). Beyond suggesting that programs include the management and application of technology, there are no clues as to what a better teacher education curriculum might involve.

Both Boyer (1983) and Goodlad (1984) do provide specific suggestions for teacher education. Although addressed to the total teacher education field,

their general suggestions do apply to vocational education. Others apply specifically.

Goodlad's proposal includes a major restructuring of schooling, making it difficult to pick out specific pertinent recommendations from his general context. Some of his suggestions are of particular interest to vocational education, however, and thus pertain to preparation of vocational education teachers. Among the recommendations is closer collaboration between schools and the workplace, with attention to vocational and career education for all students. Noting that students report that vocational subjects are among those they especially like, Goodlad cautions against narrow job training programs that are out of date or that fail to provide adequate preparation for the technological age.

The importance of vocational and career education for all students was also voiced earlier by Silberman (1983) and Hughes (1984). From a vocational educator's point of view, the implications for teacher education are tremendous, especially for the secondary level. If teachers are to be responsible for more "general" vocational education and for increased collaboration between school and community, they need more preparation than a few courses built on job analysis and the usual class in coordination techniques.

Boyer (1983) proposes guidelines for teacher education that are somewhat different from (yet consistent with) Goodlad's. Boyer calls specifically for a 5-year teacher education program, as well as a well-defined career path. But the recommendation that is most consistent with Goodlad's is Boyer's proposal for a closer connection between the school and the community. This includes recruitment of successful professionals for part-time teaching as part of formal partnerships with business and industry.

Boyer's other recommendations are difficult to relate to vocational teacher education. He does not support vocational education programs in the high school, yet cites the need for exploration of employment opportunities, understanding of the world of work, and better guidance services in studying career paths. To the extent that vocational educators would have some responsibility for the suggested content (as they should), there are implications for helping prospective teachers acquire the necessary knowledge and skills for this more general content.

Several reports do make general recommendations for close association between school and work. Education for Tomorrow's Jobs, the report of the National Academy of Sciences-National Research Council (Sherman 1983) is more specific in its recommendations. The report criticizes teacher education, especially colleges of education that "have not paid special attention to vocational education and the differences in teaching methods required" (p. 75). It should be noted that the National Academy of Sciences Commission is the only one among those cited that included vocational educators. Its recommendations merit attention for that reason alone.

The most controversial recommendations are first, that college credit be awarded for occupational training or experience in industry and second, that special curricula be developed for those whose skills were learned at places

other than college. Third, it recommends that inservice activities for teachers include periodic internships in business and industry to sharpen occupational knowledge and skills.

The third recommendation is a current emphasis in vocational education generally, as well as in all of education. The several reports call for closer collaboration between school and the workplace, although not to the extent that the workplace dictates curriculum. The problem in implementing closer collaboration is not the idea, but the cost and logistics of its implementation. For example, when a teacher leaves the classroom to collaborate with industry, money must be found to provide a substitute teacher. If the internship is outside the community, there is the cost of a second place to live. Furthermore, there are costs to industry: wages for the intern or, at the least, the costs of having the intern on the premises. In some types of work, there are security problems. Ideas about closer collaboration are fine, but procedures and resources are what is needed.

The recommendations on college credit for experience and alternate routes to certification involve problems not so much of resources as of philosophy. However, there are institutions that give credit for demonstrated occupational competence. Many (but not all) are a part of the National Occupational Competency Testing Institute (NOCTI) System, a development within vocational education. The more general approach of credit for life experiences may also be appropriate here and warrants attention from vocational teacher educators.

A special track for vocational teachers is less acceptable. In 1968, Barlow and Reinhart (cited in Schaefer and Law 1973) noted the uniqueness of the trade and technical teacher who comes from the job to the school. This uniqueness is both an asset and a liability; that is, the vocational skill is an asset to the teacher, but the "lack of academic credentials generally relegates him to a lower social and professional ranking" (p. 1316). If we seek excellence in vocational teacher education, we cannot do so by establishing a lower-level track. This would be the teacher education equivalent of the widely criticized tracking of high school students into inferior vocational education programs.

Action that would diminish the quality of teachers is clearly not acceptable. In analyzing the recent major reports, Griesemer and Butler (1983) cite five precepts that underlie all of the reports, one of which is that teachers and teaching are fundamental to improvement in schools. Their assertion that, "improved educational outcomes are essential for the economic and social well-being of the individual and, therefore, of the nation" (p. 4) is also of particular interest.

Research on Teaching and Proposed Directions

Reports of research on teaching fill volumes. The research reported here is an eclectic selection. Criteria for choice were the relevance of the study to the various commission reports, the stature of the report itself (or of its director), its usefulness in helping to explain relevant recommendations and, of course, its applicability to vocational teacher education.

Included here are data on selection criteria for admission to teacher education programs, credentialing, the content and process of teaching, and suggestions for a global perspective.

Selection Criteria

Many reports lament the fact that our most able students are not entering teaching. This concern is supported by Feistritzer (1983). In a technical report for a Carnegie Foundation study, The Condition of Teaching, she reports that "never before in the nation's history has the caliber of those entering the teaching profession been as low as it is today" (p. 112). She notes that 1982 Scholastic Aptitude Tests showed the scores of education majors to be well below those of students in business, the arts, and the sciences. She attributes this to the often-cited reasons of low pay, lack of opportunity to advance, lack of status, and poor working conditions in the teaching profession. Feistritzer also points to the movement of women out of teaching and into higher-paying, higher-status careers as a drain on a formerly dependable pool of potential teachers.

There may be yet another reason. In discussing trends in teacher education, Haberman and Stinnett (1973) call attention to increased access--that is, a movement toward open enrollment and the right of individuals to study what they choose. Unfortunately, Haberman and Stinnett dwell on the problems of education colleges that must accept candidates considered not good teacher material, yet the authors mention equity and excellence ramifications only briefly, if at all.

The problems associated with recruitment of able students into teaching are among the most serious and most difficult, however, and they are exacerbated by the need of less-prestigious institutions to maintain enrollments. Some forward-looking States (and universites with resources) are seeking solutions, largely through some form of educational subsidy. However, Boyer (1983) notes the hypocrisy of colleges calling for excellence while "spending several hundred million dollars recruiting athletes and spending virtually no time or money recruiting prospective teachers" (p. 173).

Credentialing

Feistritzer (1983) gives the most recent, definitive data on teacher education and certification. Included are data on teacher testing, program approval, certification, and such aspects of programs as length of student teaching. All are of concern to vocational teacher education.

Requirements for use of tests in the process of teacher certification are changing so rapidly that data are generally outdated by the time they are published. But some States now require a test of basic skills as prerequisite to entering a teacher education program, and some require passing scores on a content area test. The recent revision of the Core Battery of the National Teachers Examination has led to consideration of its use by States that had

not used it regularly. In addition, there are local tests for a variety of topics.

The present emphasis on testing for teacher education applicants is likely to remain for a few years, but testing of practicing teachers is a separate issue. Testing is supported by the American Federation of Teachers (AFT) as a reasonable way of upgrading the profession. Yet testing is opposed by the National Education Association (NEA) as an appropriate measure of competence. Both views are presented in the summer 1982 issue of Educational Measurement. Shanker and Ward (1982) present the AFT argument and Hodgkins and McKenna (1982) present the NEA's position. In the same issue, Vlaanderen (1982), speaking for the Education Commission of the States, cautions that all implications of a testing policy must be carefully considered prior to adoption. He then suggests other ways of improving teacher education.

Feistritzer (1983) reports that "all states now require a bachelor's degree in order to get a license to teach" (p. 101). Unfortunately, this statement is inaccurate for vocational teachers in various States. For example, Iowa's policy on vocational teacher qualifications reads simply:

> Secondary preparatory/occupational. For authorization to teach in specific preparatory or occupational programs in grades nine through twelve, an applicant must have met the requirements as outlined in the state plan for the administration of career education. (Iowa Department of Public Instruction 1980, pp. 13-14)

This authorization does not apply to teachers of agriculture, business, distributive education, or home economics, for all of whom the degree is required. Clearly, the second-class credentialing of such teachers, largely in trade and industrial fields, must be addressed in a search for excellence in vocational teacher education.

The Content and Process of Teaching

Among the various reports' recommendations for students are (1) increased attention to the basics, including computers; (2) the development of higher-order cognitive skills; and (3) preparation for the role of worker. The following addresses those recommendations.

Goodlad (1984) makes a strong case for increasing the range of teaching behaviors. In his study, he found the current range to be typically narrow, centered mainly on lecturing, seat work, and rote learning. Clearly, student teachers need to attain the ability to understand and explain relationships, to solve problems, to analyze, and to grasp differences.

Sirotnik (1983) documents a lack of open questions, corrective feedback, reinforcement of any kind, student-to-student or student-to-teacher interaction, or other activity in the classroom that has a high proportion of student involvement. The few classes that do include involvement (primarily psychomotor) are art, vocational, and physical education classes. Even so, those classes are not characterized as lively and stimulating. The vocational

subjects are especially good areas for these kinds of study, because for students to develop these behaviors, they must see them modeled in methods (and other) classes and must practice them in a supportive environment.

Content of educational programs is another concern. The need for currency in vocational classes is a given, to be attended not only by collaborating with business but also by providing incentives for future teachers to keep their programs up-to-date. These needs are not addressed here in detail because, for the most part, the specifics are unique to the service areas.

Of course, the need to emphasize basic skills in vocational education applies across the board. Models for integrating basic skills into vocational programs have been proposed. Campbell-Thrane et al. (1983), for example, recommend a model that integrates basic skills within vocational classes. Lotto (1983) also supports the inclusion of basic skills training in her study of the basic skills proficiencies of vocational students.

What, then, are the implications for teacher education? Campbell-Thrane et al. (1983) include reading, writing, oral communication, and math in their list of pertinent basic skills. Others would add the physical and biological sciences. Clearly, if vocational teachers are to be responsible for instruction in these skills, teacher education programs must place greater emphasis on them in preparing future vocational teachers. Not only must the relevant subject matter be taught, but also the methods of integrating this material into vocational courses.

Global Perspective

The increasing complexity of international relations, the need to understand and teach people from other cultures, and the increasing interdependency of nations led American Association of Colleges for Teacher Education and the International Council on Education for Teaching to propose that all teacher education programs include a global perspective. Presenters at a recent conference (e.g., Reagan 1984; Zimpher 1984) include suggestions for implementing this recommendation. They suggest that teacher education faculty acquire the necessary knowledge and experience to provide this perspective within teacher education programs.

Such a perspective is useful for vocational educators, both teacher educators and classroom teachers. Particularly in developing nations, educational leaders are increasing their programs in vocational education, frequently with the help of U.S. teachers and teacher educators. Thus there is reason to support this dimension of teacher preparation in our country.

Preparation of Beginning Teachers

The Panel on the Preparation of Beginning Teachers (Boyer 1984), convened by the New Jersey Department of Education, provides definitive recommendations for teacher education. Of special importance is the identification of

"knowledge and skills essential for beginning teachers" (p. 1), while also recognizing that there are other, desirable areas of knowledge.

According to the panel, essential knowledge for beginning teachers addresses three areas: the curriculum, the student, and the setting. Recommendations about the curriculum concern knowledge of what is taught and how it is assessed. What is taught includes knowledge of subject matter, organization of that content, and the importance of learning outside the classroom. Assessment includes the ability to evaluate both kinds of learning, including (for classroom learning) knowledge of how to use prepackaged tests appropriately and skill in constructing original evaluation devices.

Knowledge of students includes both characteristics of students and the ways in which they learn. In expanding the statement, the panel notes that teachers often have disruptive children in their classes and need to know how to deal with them in real-life situations. The panel suggests that study of students by education majors might proceed from classroom experience to theory rather than the reverse, as is most often the case.

The third area of knowledge, the classroom as a social unit and the school as an organization, recognizes the increasing need for teachers to cope with the bureaucracy of public education. The panel's report does not expand on this, but the situation is recognized in all of the major reports reviewed here.

Teacher skills recommended by the panel are those that research suggests to be most effective. Interestingly, the first is a call for integrity and commitment to the profession, including standards of ethics and personal behavior. Whereas other reports cite the need for teachers to learn and practice respect for others, the panel's report is one of the few that focuses on this dimension of professionalism and draws the attendant implications for teacher education.

Pedagogical skills recommended by the panel are, by its own admission, not new. Yet many of these skills are not in common practice. Among the panel's recommended skills are (1) having clear goals for instruction; (2) giving many clear, detailed examples; (3) encouraging creative thoughts and wise use of knowledge; and (4) supporting a spirit of openness in the classroom.

Recommendations for Vocational Teacher Education

Few of the reports reviewed here give new or creative recommendations for achieving excellence in vocational teacher education. As noted by Mertens and Yarger (1982) and more recently by Boyer (1984), we already know what to do. The crux of the problem is that we do not have a base of support for instituting the necessary changes on a broad scale.

The following recommendations should nevertheless lead to excellence in vocational teacher education. The intent is to train vocational teachers who are well qualified in content and pedagogy and who are thoroughly equipped to deal with today's students in today's schools and communities.

A number of important steps are necessary to achieve this goal. Several are within the control of the higher education institutions; others require an increased commitment from the larger society. As will be evident, the recommendations are not mutually exclusive. The steps to be implemented in vocational teacher education are as follows:

- o Content in the Subject Areas. Provide depth of knowledge and related skills in the subject area to be taught. Build this upon a strong base in the sciences (e.g., social, physical, biological), in mathematics, and in other root disciplines. Develop an understanding of the relationship of the latter to the former, in sufficient detail that this understanding can be taught to others.

- o Understanding of Students. Provide opportunity to work with students in classrooms and in less-formal settings; provide experiences with the families and communities in which the students live. Relate the experiences to study in the social sciences.

- o Pedagogical Skills. Provide skills for identifying content suited to students, sequencing it logically, and incorporating related basic skills. Provide skills for organizing the content into lessons, units, or programs. Provide more effectively for learning and using a variety of instructional strategies, with emphasis on development of higher-order cognitive skills. Provide more basic knowledge needed to evaluate achievement of students and the effects of their instruction.

- o Coping with the Bureaucracy. Provide opportunities to understand and work with social systems, bureaucracies, and other politics of education and of work. For vocational teachers, the politics of work include those pertinent to teachers themselves and those pertinent to students in the workplace.

- o Interrelationship of School, Work, and Family. Provide instruction that addresses explicitly the contributions of the school, work, and the family to the well-being of the individual and society. Prepare future vocational teachers to assist students to consider how each area affects their choices for the future; be able to provide assistance in making the choices.

- o Field Experiences. Provide field experiences that will help future teachers understand the aforementioned studies; that will offer opportunities to learn teaching and related skills in a supportive environment; and that will enable future teachers to work effectively in the community, including but not limited to the business and industrial sectors.

- o Upgrade Vocational Teachers. Provide a career ladder for teachers of vocational subjects, including higher salaries when appropriate. Require of all vocational teachers credentials equivalent to those of academic teachers; that is, a baccalaureate at minimum. Expedite and facilitate obtaining the degree, including offering credit for work experience. Provide both opportunity and support for skills updating,

including experiences in business, industry, and social service agencies.

A variety of potential conditions will help expedite moves toward excellence. Among them are the creation of networks among educators within respective vocational service areas and among vocational educators in all areas. Discussion of direction is not difficult and promising practices are readily shared. But excellence will be achieved only when vocational educators acknowledge and move to correct the recognized deficiencies.

REFERENCES

Academic Preparation for College: What Students Need to Know and Be Able to Do. New York: College Entrance Examination Board, 1983. (ERIC Document Reproduction Service No. ED 232 517).

Action for Excellence. A Comprehensive Plan to Improve Our Nation's Schools. Denver, CO: Task Force on Education for Economic Growth, Education Commission of the States, 1983. (ERIC Document Reproduction Service No. ED 235 588).

Adler, M. J. The Paideia Proposal: An Educational Manifesto. Prepared on Behalf of the Members of the Paideia Group. New York: Macmillan, 1982.

American Society for Training and Development. Models for Excellence: The Conclusions and Recommendations of the ASTD Training and Development Competency Study. Washington, DC: American Society for Training and Development, 1983.

America's Competitive Challenge: The Need for a National Response. A Report to the President of the United States from the Business-Higher Education Forum. Washington, DC: Business-Higher Education Forum, 1983. (ERIC Document Reproduction Service No. ED 231 321).

Arbeiter, S.; Aslanian, C.; Schmerbeck, F.; and Brickell, H. 40 Million Americans in Career Transition: The Need for Information. New York: Future Directions for a Learning Society, The College Board, 1978. (ERIC Document Reproduction Service No. ED 163 178).

Barlow, M. L., and Reinhart, B. Profiles of Trade and Technical Teachers--Comprehensive Report. Los Angeles: University of California at Los Angeles; Sacramento: Bureau of Industrial Education, California State Department of Education, 1968. (ERIC Document Reproduction Service No. ED 019 457).

Barranco, J. "Accountable after the Politicians Have Moved On . . ." In "Symposium on the Year of the Reports: Responses from the Educational Community." Harvard Educational Review 54 (February 1984): 6-11. (ERIC No. EJ 296 356).

Boyer, E. L. High School: A Report on Secondary Education in America. New York: Harper and Row, 1983.

_____. Report of a Panel on the Preparation of Beginning Teachers. Princeton, NJ: The Henry Chauncey Center, March 1984.

Campbell-Thrane, L.; Manning, K.; Okeafor, K.; and Williams, E. J. Building Basic Skills: Models for Implementation. Special Publications Series no. 41. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1983. (ERIC Document Reproduction Service No. ED 232 016).

Carnevale, A. P. Human Capital: A High Yield Corporate Investment. Washington, DC: American Society for Training and Development, 1983.

Carnevale, A. P., and Goldstein, H. Employee Training: Its Changing Role and An Analysis of New Data. Washington, DC: American Society for Training and Development, 1983.

Christopher, R. The Japanese Mind: The Goliath Explained. New York: Simon and Schuster, 1983.

Cross, K. P. Adults as Learners: Increasing Participation and Facilitating Learning. San Francisco, CA: Jossey-Bass, 1981.

David, H. Vocational Education in the Comprehensive High School: Assessing the Needs. Arlington, VA: American Vocational Association, September 1983.

Dearman, N. B., and Plisko, V. W. The Condition of Education: 1981 Edition. Washington, DC: National Center for Education Statistics, 1981. (ERIC Document Reproduction Service No. ED 207 186).

Edmonds, R. "Programs of School Improvement: An Overview." Educational Leadership 40 (December 1982): 4-11. (ERIC No. EJ 272 633).

Elfenbein, I. M. "Introduction to the Proceedings." In Functional Literacy and the Workplace. Proceedings of a National Conference. Washington, DC: American Council on Life Insurance, 1983. (ERIC Document Reproduction Service No. ED 235 384).

Evans, R. "Paideia Report." In The School Studies: Implications for Vocational Education. Arlington, VA: American Vocational Association, 1983.

Feistritzer, C. E. The Condition of Teaching. A State by State Analysis. New York: The Carnegie Foundation for the Advancement of Teaching, 1983. (ERIC Document Reproduction Service No. ED 238 869).

Galambos, E. C. Issues in Vocational Education. Atlanta, GA: Southern Regional Education Board, 1984. (ERIC Document Reproduction Service No. ED 240 312).

Gardner, J. W. Excellence: Can We Be Equal and Excellent Too? New York: Harper and Row, 1961.

Golladay, M. A. The Condition of Education: A Statistical Report on the Condition of Education in the United States, Together with a Description of the Activities of the National Center for Education Statistics. 1976 ed. Washington, DC: National Center for Education Statistics, 1976. (ERIC Document Reproduction Service No. ED 120 910).

Goodlad, J. I. A Place Called School: Prospects for the Future. New York: McGraw-Hill, 1984.

Griesemer, J. L., and Butler, C. Education under Study: An Analysis of Recent Major Reports on Education. 2d ed. Chelmsford, MA: Northeast Regional Exchange, 1983. (ERIC Document Reproduction Service No. ED 240 726).

Haberman, M., and Stinnett, T. M. Teacher Education and the New Profession of Teaching. Berkeley, CA: McCutchan Publishing, 1973.

Halasz, I. M., and Behm, K. S. Time on Task in Selected Vocational Education Classes. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1983. (ERIC Document Reproduction Service No. ED 229 528).

Halasz, I. M.; Behm, K. S.; and Fisch, M. R. Influences on Secondary and Postsecondary Vocational-Technical Student Time on Task. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1984. (ERIC Document Reproduction Service No. ED 239 116).

Henry, J. F. "Expectations of the Workplace." In Functional Literacy and the Workplace. Proceedings of a National Conference. Washington, DC: American Council on Life Insurance, 1983. (ERIC Document Reproduction Service No. ED 235 384).

Henry, J. F., and Raymond, S. Basic Skills in the U.S. Work Place: The Contrasting Perceptions of Business, Labor, and Public Sector. New York: Center for Public Resources, 1982.

Hoachlander, E. G. "Vocational Education in the Nation's Secondary Schools." Background paper prepared for the Committee on Science, Engineering, and Public Policy, The National Academy of Sciences, August 1983.

Hodgkins, R., and McKenna, B. "Testing and Teacher Certification: An Explosive Combination." Educational Measurement: Issues and Practice 1 (Summer 1982): 10-12, 26. (ERIC No. EJ 269 338).

"How Business Is Joining the Fight against Functional Illiteracy." Business Week, April 16, 1984, pp. 94, 98.

Howe, H. "Education Moves to Center Stage: An Overview of Recent Studies." Phi Delta Kappan 65 (November 1983): 167-172. (ERIC No. EJ 289 640).

Hughes, R. P. Secondary Vocational Education: Imperative for Excellence. Information Series no. 277. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1984. (ERIC Document Reproduction Service No. ED 241 758).

Iowa Department of Public Instruction. Rules for Teacher Education and Certification. Des Moines: Iowa Department of Public Instruction, 1980.

Joyce, B., and Clift, R. "The Phoenix Agenda: Essential Reform in Teacher Education." Educational Researcher 13 (April 1984): 5-18.

Kay, E. R. Participation in Adult Education 1981. Washington, DC: National Center for Education Statistics, 1982. (ERIC Document Reproduction Service No. ED 221 751).

Kolde, R. F. "Reauthorization: Adult Vocational Education Is a National Priority." VocEd 59 (January-February 1984): 36-37. (ERIC No. EJ 292 681).

Levin, H. M. Education and Jobs in a Technological World. Information Series no. 265. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1984. (ERIC Document Reproduction Service No. ED 240 383).

Lotto, L. S. Building Basic Skills: Results from Vocational Education. Research and Development Series no. 237. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1983. (ERIC Document Reproduction Service No. ED 232 015).

March, J. "Footnotes to Organizational Change." Unpublished manuscript, n.d.

Mertens, D. M., and Gardner, J. A. "The Long-Term Effects of Vocational Education." Journal of Vocational Education Research 8 (Spring 1983): 1-21. (ERIC No. EJ 287 710).

Mertens, S. K., and Yarger, S. J. "Escape from Deja Vu: On Strengthening Teacher Education." Journal of Teacher Education 33 (July-August 1982): 8-12. (ERIC No. EJ 269 105).

National Commission on Excellence in Education. A Nation At Risk: The Imperative for Educational Reform. Washington, DC: National Commission on Excellence in Education, 1983. (ERIC Document Reproduction Service No. ED 226 006).

"National Commission on Secondary Vocational Education Formed." Centergram 19 (May 1984): 1-2.

National Commission on the Reform of Secondary Education. Reform of Secondary Education. New York: McGraw-Hill, 1973.

National Science Board Commission on Precollege Education in Mathematics, Science, and Technology. Educating Americans for the 21st Century. Washington, DC: National Science Foundation, 1983. (ERIC Document Reproduction Service No. ED 233 913).

Nunez, A. R., and Russell, J. F. As Others See Vocational Education, Book 1: A Survey of the National Association of Manufacturers. Research and Development Series no. 225B. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1982. (ERIC Document Reproduction Service No. ED 227 206).

Peters, T., and Waterman, R. In Search of Excellence. New York: Harper and Row, 1982.

Peterson, P. E., and the Twentieth Century Fund Task Force on Federal Elementary and Secondary Education Policy. Making the Grade. New York: Twentieth Century Fund, 1983. (ERIC Document Reproduction Service No. ED 233 112).

Pipho, C. "Stateline: States Warm to Excellence Movement." Phi Delta Kappan 65 (April 1984): 516-517.

Pipho, C., and Flakus-Mosquedo, P. "States Raise Requirements for High School Grads." State Education Leader (Winter 1984): 5-7.

Plisko, V. W., ed. The Condition of Education. 1983 Edition. A Statistical Report. Washington, DC: National Center for Education Statistics, 1983. (ERIC Document Reproduction Service No. ED 233 476).

Pratzner, F. C. "Look before You Leap Aboard the Industry/Education Bandwagon." VocEd 58 (October 1983): 13-14.

Pratzner, F., and Ashley, W. "Occupational Adaptability and Transferable Skills: Preparing Today's Adults for Tomorrow's Careers." In Issues Facing Education: The Maturing Learner. 1985 Yearbook of the American Vocational Association. Arlington, VA: American Vocational Association, forthcoming.

Reagan, G. M. "Global Education and the General Education of Teachers." Paper presented at Global Crossroads: Educating Americans for Responsible Choices, a National assembly, Washington, DC, May 17-19, 1984.

Rumberger, R. Demystifying High Technology. Occasional Paper no. 97. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1984. (ERIC Document Reproduction Service No. ED 240 305).

Schaefer, C. J., and Law, G. L. "Research on Teaching Vocational Skills." In Second Handbook of Research on Teaching, edited by R. M. W. Travers. Chicago: Rand McNally, 1973.

Sewall, G. "Vocational Education That Works." Fortune, September 19, 1983, pp. 68-78.

Shanker, A., and Ward, J. G. "Teacher Competency and Testing. A National Affinity." Educational Measurement: Issues and Practice 1 (Summer 1982): 6-9, 26. (ERIC No. EJ 269 337).

Sherman, S. W., ed. Education for Tomorrow's Jobs. Washington, DC: Commission on Behavioral and Social Sciences and Education, National Academy of Sciences-National Research Council, 1983. (ERIC Document Reproduction Service No. ED 236 418).

Silberman, H. F. Determining Goals for Vocational Education. Occasional Paper no. 96. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1983. (ERIC Document Reproduction Service No. ED 239 109).

Sirotnik, A. "What You See Is What You Get--Consistency, Persistency, and Mediocrity in Classrooms." Harvard Educational Review 53 (February 1983): 16-31. (ERIC No. EJ 275 754).

Smith, D. "Strategies for Serving Select Populations: Issues and Perspectives." New Directions for Continuing Education, no. 20 (December 1983): 97-110.

Smith, R. Learning How to Learn: Applied Theory for Adults. Chicago: Follett, 1982.

Vlaanderen, R. B. "Teacher Competency Testing: Status Report." Educational Measurement: Issues and Practice 1 (Summer 1982): 17-20, 27. (ERIC No. EJ 269 339).

Weick, K. The Social Psychology of Organizing. 2d ed. Reading, MA: Addison-Wesley, 1979.

Zimpher, N. L. "Global Education in the General Professional Methods Component of Teacher Preparation Programs." Paper presented at Global Crossroads: Educating Americans for Responsible Choices, a National assembly, Washington, DC, May 17-19, 1984.